

WHAT IS CLAIMED IS:

1. A method for reducing thickness of spin-on glass on semiconductor wafers, the method comprising:

rotatably mounting a semiconductor wafer;

5 positioning a grinding member proximate an outer edge of the semiconductor wafer;

rotating the semiconductor wafer;

rotating the grinding member;

10 applying a chemical to the outer edge; and

engaging the rotating grinding member with the outer edge of the rotating semiconductor wafer.

2. The method of Claim 1, further comprising:

disengaging the rotating grinding member; and

15 rinsing the semiconductor wafer with deionized water.

3. The method of Claim 1, wherein rotatably mounting the semiconductor wafer comprises securing the semiconductor wafer in a substantially horizontal position to a spindle with a vacuum chuck.

20 4. The method of Claim 1, wherein positioning the grinding member comprises orientating the grinding member in a substantially horizontal position.

25 5. The method of Claim 1, wherein positioning the grinding member comprises orientating the grinding member in a substantially vertical position.

6. The method of Claim 1, wherein applying the chemical comprises using a syringe to apply a hydrofluoric acid to approximately a portion of the outer edge that is engaged with the grinding member.

7. The method of Claim 1, wherein engaging the rotating grinding member with the outer edge of the rotating semiconductor wafer comprises pneumatically controlling the grinding member.

5 8. The method of Claim 1, wherein engaging the rotating grinding member with the outer edge of the rotating semiconductor wafer comprises spring-loading the grinding member.

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9. A method for reducing thickness of spin-on glass on semiconductor wafers, the method comprising:

5 rotatably mounting a semiconductor wafer;

positioning a grinding member proximate an outer edge of the semiconductor wafer;

10 rotating the semiconductor wafer;

rotating the grinding member;

15 applying deionized water to approximately the center of the rotating semiconductor wafer; and

engaging the rotating grinding member with the outer edge of the rotating semiconductor wafer.

10 10. The method of Claim 9, wherein rotatably mounting the semiconductor wafer comprises securing the semiconductor wafer in a substantially horizontal position to a spindle with a vacuum chuck.

15 11. The method of Claim 9, wherein positioning the grinding member comprises orientating the grinding member in a substantially horizontal position.

20 12. The method of Claim 9, wherein positioning the grinding member comprises orientating the grinding member in a substantially vertical position.

25 13. The method of Claim 9, wherein engaging the rotating grinding member with the outer edge of the rotating semiconductor wafer comprises pneumatically controlling the grinding member.

14. The method of Claim 9, wherein engaging the rotating grinding member with the outer edge of the rotating semiconductor wafer comprises spring-loading the grinding member.

15. A method for reducing thickness of spin-on glass on semiconductor wafers, the method comprising:

5 providing a chemical in a container;

rotatably mounting a semiconductor wafer;

bearing a grinding member against a portion of an outer edge of the semiconductor wafer; and

10 rotating the semiconductor wafer while the semiconductor wafer is in contact with the grinding member and while the portion of the outer edge of the semiconductor wafer is immersed in the chemical.

15. The method of Claim 15, further comprising rinsing the semiconductor wafer with deionized water.

17. The method of Claim 15, wherein rotatably mounting the semiconductor wafer comprises securing the semiconductor wafer in a substantially vertical position to a spindle with a vacuum chuck.

20. The method of Claim 15, wherein positioning the grinding member comprises orientating the grinding member in a substantially horizontal position.

19. The method of Claim 15, wherein bearing the grinding member against the portion of the outer edge comprises pneumatically controlling the grinding member.

25. The method of Claim 15, wherein bearing the grinding member against the portion of the outer edge comprises spring-loading the grinding member.